

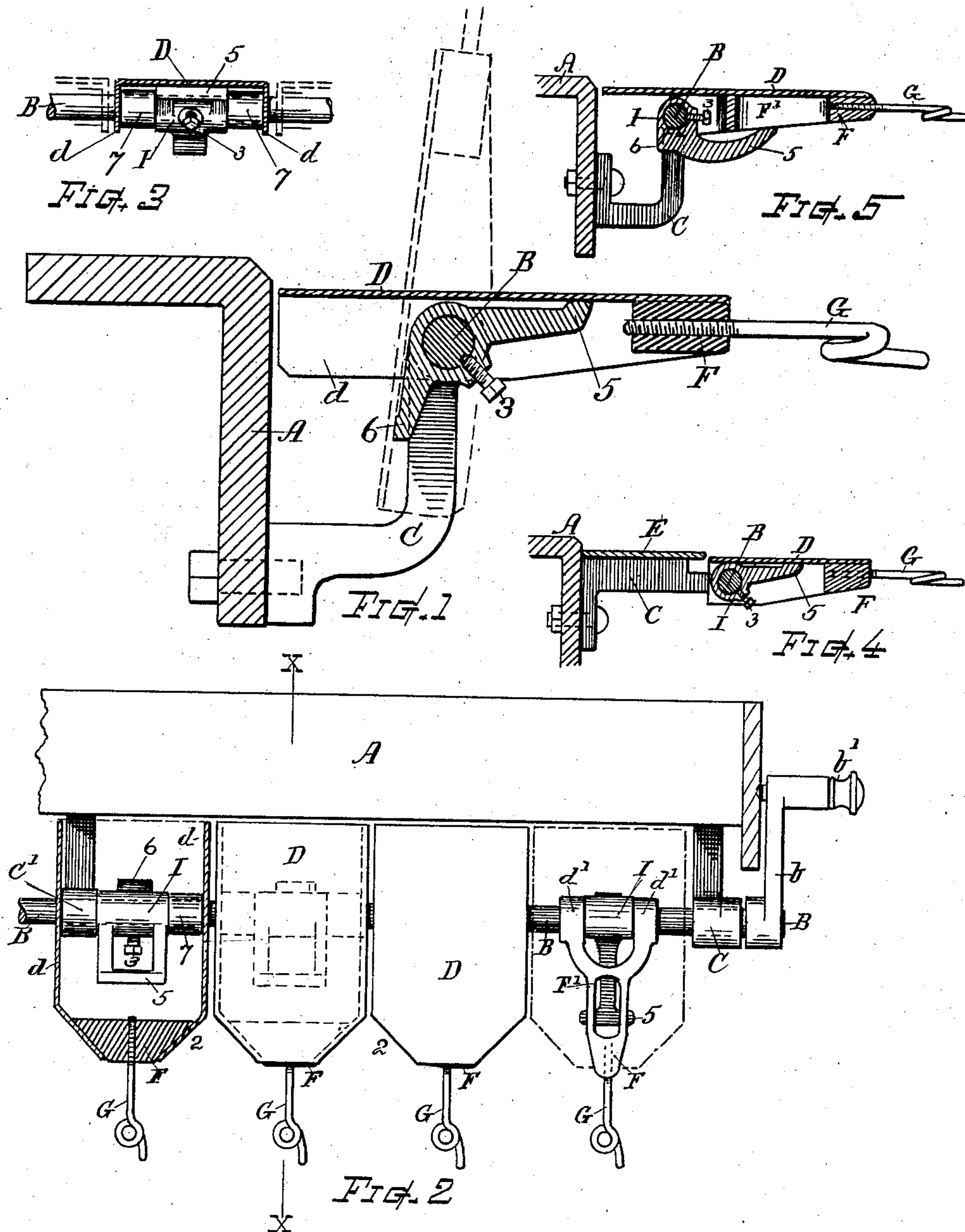
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J. E. PREST.
YARN GUIDE HOLDING MECHANISM.

APPLICATION FILED NOV. 21, 1903.

NO MODEL.



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YARN-GUIDE-HOLDING MECHANISM.

SPECIFICATION forming part of Letters Patent No. 753,625, dated March 1, 1904.

Application filed November 21, 1903. Serial No. 182,069. (No model.)

To all whom it may concern:

Be it known that I, JOHN E. PREST, a citizen of the United States, residing at Worcester, in the county of Worcester and State of Massachusetts, have invented a new and useful Yarn-Guide-Holding Mechanism for Spinning and Twisting Machines, of which the following, together with the accompanying drawings, is a specification sufficiently full, clear, and exact to enable persons skilled in the art to which this invention appertains to make and use the same.

The objects of my present invention are to provide a more convenient and efficient yarn-guide-holding mechanism for spinning and twisting machines, also to provide a guide-holder plate that can be inexpensively constructed of metal and of such character as will permit of the guide-holder being readily freed from the collection of lint or flyings that settle thereon.

Another object is to dispense with the usual thread-board and dual sets of hinging and to provide a tiltable guide-holder that extends from the guide to the roller-beam in a single plate or without intermediate joint and that is tiltable upon a rod or axis disposed at a point beneath the guide-holder plate.

Another object is to provide mechanism for the purpose named comprising a supporting-rod and swinging guide-holders pivotally supported thereon and adapted for simultaneously swinging an entire series of guides up or down by rotation of the rod and also permitting the independent swinging up and down of the single guide-holder pivotally upon said rod, as more fully hereinafter explained.

I attain these objects by a mechanism constructed and organized for operation as more particularly specified in the following detailed description and defined in the claims and as illustrated in the accompanying drawings, wherein—

Figure 1 is a vertical section at line X X on Fig. 2 of a yarn-guide holder mechanism embodying my invention. Fig. 2 is plan view,

partly in section, showing a row of my improved guide-holders as arranged in series when on the spinning or twisting machine. Fig. 3 is a transverse section, and Figs. 4 and 5 illustrate modifications.

Referring to the drawings, the part marked A represents that part of a spinning-machine frame commonly termed the "roller-beam" and on which the thread-guiding mechanism is carried, according to usual practice.

B indicates the supporting-rod or axis-shaft of my improved mechanism, which shaft extends along the front of the roller-beam for the full length of the series of guide-holders, and is mounted in bearing-brackets C, fixed on the roller-beam to have a rocking action, any suitable means, as an arm *b* and catch-device *b'*, being provided for rocking the shaft or for controlling its adjustment and holding it at normal position.

D indicates the guide-holder plate formed of cast metal or sheet metal, with its side edges *d* bent downward and perforated for the reception of the rod or shaft which extends laterally through said side portions and forms an axis on which the holder-plate is tiltable. The front end of the plate is preferably formed with inclined edges, as at 2, and a block F, of metal, wood, vulcanized fiber or other suitable material, is fixed thereto, into which the stem of the guide-eye G is screwed or secured in any efficient manner. The guide-holder plates are made with flat top surface and of proper width to correspond with the gage or spacing of the spindles on the spinning-machine, usually about two and one-half inches, more or less. Said plates extend from the front end, wherein the guide is secured, completely back to the roller-beam A without intermediate joints or hings in their length, so that the series of guide-holders present a smooth plain top surface that will not tend to catch lint or flyings and which can be readily wiped off clean without offering obstructions to the wiper.

I indicates a lifter and stop device, fixed upon the shaft B and held rigid thereon by

the set-screw 3. Said lifter consists of a hub or casting disposed centrally beneath the plate D and having a forwardly-projecting member 5, that stands in horizontal position and forms a rest for the guide-holder plate when the guide is at normal working position. It is also provided with a heel or back-stop member 6, against which the plate contacts when the latter is tilted up independently of the lifter, which latter is also capable of a tilting movement by rocking the shaft.

The perforated side portions d of the plate form a pivotal connection and support for the guide-holder upon the rock-shaft B, so that the guide-holder can be tilted back upon said shaft as a center axis independently of the lifter device I.

The lateral relation of the guide-holders can be adjusted by loosening the screw 3 and slipping the lifter-hub to right or left on the shaft, which latter is best provided with a longitudinal groove or flattened section for the points of the set-screws. The length of the lifter-hub may be made the same dimension as the width between the sides d of the plate D, or said hub may be narrower and the space filled up by tubular washers 7, as shown in Fig. 2. The bearings $C' C'$ for the intermedial supports of the shaft are best made to occupy the position of one of said washers 7 beneath the particular guide-holder where such bearings occur, so that there is no break in the gage continuity of the series of guide-holders.

In the operation each of the guide-holders D can be tilted on the shaft B as a pivotal axis independently of the others. Also the entire series can be tilted for raising the guides G simultaneously for doffing and changing bobbins by partially rotating the rocker-shaft B by means of the device or arm b , attached to the shaft for such purpose. This movement of the shaft swings up the lifter-fingers 5 beneath the plates D, and consequently tilts up the guide-holders, the front end, with the guide, swinging upward and the rear end of the guide-holder swinging downward. When the shaft is rocked forward, the heels or fingers 6 tilt the plates forward, bringing all the guides simultaneously to normal working position.

In Fig. 4 I illustrate a modification wherein the rear portion of the guide-holder plate D is made shorter or terminated near the rocker-shaft B, and a permanently-secured plate of metal E is arranged along the front of the roller-beam A approximately adjacent to the top level of the guide-holder plate.

In Fig. 5 I illustrate a modification wherein the block or member F, in which the guide-stem G is secured, is extended rearward, as at F', and forms, as at d' , the pivotal attachment to the shaft B in lieu of the downwardly-

bent side edges d of the sheet-metal plate. A plan view of this form is shown at the first guide-holder on the right in Fig. 2. In this modification the plate D is a simple flat sheet or light metal top piece cast integral with or attached to the member F', which, together with its lifter I, can be made of comparatively narrow uniform gage, and the top plate can be cut of a width and form to fit the wider or narrower gage of any spinning or twisting machine whereon the guide-holders are employed.

I am aware that thread-guide holders of different construction have prior to my invention been supported on a rod that could be rocked for raising the guides; but such guide-holders required an intermediate separate hinge for permitting independent adjustment of the guides. I am also aware that dually-hinged guide-holders have been made from sheet-metal. It will therefore be understood that I do not broadly claim such prior employed features in a guide-holder mechanism as of my invention.

What I claim as of my invention, and desire to secure by Letters Patent, is—

1. A yarn-guide-holder mechanism, comprising an axial supporting-shaft, an independently-swinging guide-holder mounted on said shaft and extending from the guide to the roller-beam, in a single length without intermediate divisional hinging, the yarn-guiding eye carried by said holder, and means for arresting the swing movement of said holder when the guide is at working position.

2. A yarn-guide holder, comprising a flat-topped metal plate having downwardly-turned perforated sides, said plate provided with a front end block, the guide-eye secured in said block, a supporting-rod passing transversely through said perforated side portions, a lifter device secured to the rod between said side portions and provided with means for retaining the plate in lateral relation to the lifter, and a forward projection for supporting the plate when horizontal and for lifting said plate by partial rotation of the rod and lifter device.

3. In a yarn-guide holder, the combination of a rockable supporting rod or shaft, a swinging guide-holding member overlying said shaft and having side portions whereby it is pivotally mounted thereon, an underlying hub adjustably secured to said shaft by set-screw, and having forward and rearward projections that limit the independent swing action of said guide-holding member, a guide-eye supported in said member, and means for controlling the rocking adjustment of the shaft.

4. In a yarn-guide-holder mechanism, the combination with the roller-beam, guide-holder-supporting shaft, guide-holder plate having downward side portions with openings

through which the shaft extends, and the
lifter device fixed to the shaft centrally be-
neath said plate; of the shaft-supporting
bracket having its bearing-head C' disposed
5 to embrace the shaft between the lifter device
and the inner face of the downward side por-
tion of the guide-holder plate.

Witness my hand this 18th day of Novem-
ber, 1903.

JOHN E. PREST.

Witnesses:

CHAS. H. BURLEIGH,
ELLA P. BLENUS.